Europäisches Patentamt

European Patent Office

Office européen des brevets



(11) **EP 0 915 429 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 19.04.2000 Bulletin 2000/16

(51) Int. Ct.7: G06K 11/10

(43) Date of publication A2: 12.05.1999 Bulletin 1999/19

(21) Application number: 98110146.2

(22) Date of filing: 04.06.1998

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE Designated Extension States: AL LT LV MK RO SI

(30) Priority: 04.11.1997 JP 31662697

(71) Applicant: Wacom Co., Ltd. Saitama-ken, 349-11 (JP)

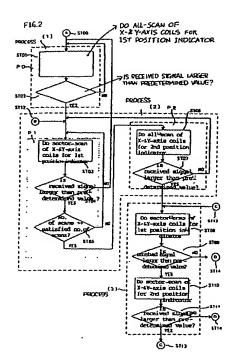
(72) Inventors:

- Sekizawa, Yasushi Kitasaitama-Gun Saitama-Ken (JP)
- Katsurahira, Yuji
 Kitasaitama-Gun Saitama-Ken (JP)
- (74) Representative:
 Paul, Dieter-Alfred, Dipl.-Ing. et al
 Fichtestrasse 18

41464 Neuss (DE)

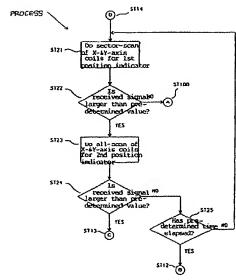
(54) Position detecting method and apparatus for detecting a plurality of position indicators

(57) A method and apparatus for detecting the positions of a plurality of position indicators by using a tablet or the like permit improved trackability. When a first position indicator has been detected on the coordinate reading surface of a position detector by implementing an all-scan step (process P0), sensor coils to be scanned are specified according to the positional information of the first position indicator so as to carry out a sector-scan step (step ST03) to perform more detailed detection of the position of the first position indicator. This sector-scan step and the all-scan step (step ST06) for detecting the approximate position of a second position indicator are implemented alternately. At this time, the sector-scan is carried out more frequently than the all-scan (processes P1 and P2).



EP 0 915 429 A3

FIG.3



EP 0 915 429 A3



EUROPEAN SEARCH REPORT

Application Number EP 98 11 0146

		ERED TO BE RELEVANT	Date		
Category	Offation of document with it of relevant pass	idication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)	
A	EP 0 736 838 A (WAC 9 October 1996 (199 * column 6; figure	6-10-09)	1,15	G06K11/10	
A	EP 0 483 709 A (IBM 6 May 1992 (1992-05 * page 11, line 39 figure 14 *	-06)	1,15		
A	EP 0 737 933 A (WAC 16 October 1996 (19 * column 6, line 55 figures 1-5 *		6,16		
Α	EP 0 417 921 A (SON 20 March 1991 (1991 * page 11, line 11	-03-20)	6,16		
A	EP 0 347 725 A (WAC 27 December 1989 (1 * column 15, line 2 figures 7-10 *		6,16	TECHNICAL FIELDS SEARCHED (Int.CI.6) G06K	
	The present search report has	been drawn up for all claims			
	Place of search	Date of completion of the search	<u> </u>	Examiner	
	BERLIN				
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken atone Y: particularly relevant if combined with another document of the same category A: technological background O: non-wnitten disclosure P: intermediate document		T: theory or principle: E: earlier patent differ after the filling differ D: document cited L: document cited &; member of the	28 February 2000 Durand, J T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document cited for other reasons 8: member of the same patent tamity, corresponding document		

SPO FORM 1563 03 B

`. . .

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 98 11 0146

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-02-2000

Patent document cited in search report		Publication date		Patent family member(s)	Publication date	
ЕP	0736838	A	09-10-1996	JP US	8278844 A 5792997 A	22-10-1996 11-08-1998
EP	0483709	A	06-05-1992	US JP JP JP US	5117071 A 1998449 C 4266116 A 7027434 B 5149919 A	26-05-1992 08-12-1995 22-09-1992 29-03-1995 22-09-1992
EP	0737933	A	16-10-1996	JP US	8286815 A 6020849 A	01-11-1996 01-02-2000
EP	0417921	A	20-03-1991	JP JP JP JP JP DE DE	2976449 B 3081814 A 2976450 B 3084613 A 2976451 B 3084614 A 69028892 D 69028892 T 5214427 A	10-11-1999 08-04-1991 10-11-1999 10-04-1991 10-11-1999 10-04-1991 21-11-1996 27-02-1997 25-05-1993
EP	0347725	A	27-12-1989	JP CN DE DE KR US	1320521 A 1040279 A,B 68920916 D 68920916 T 133068 B RE35329 E 5023408 A	26-12-1989 07-03-1990 16-03-1995 06-07-1995 24-04-1998 17-09-1996

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

State of the state